

AMENDMENTS TO THE CLAIMS:

Cancel claim 9 without prejudice.

1. (Currently Amended) A synchronous compensator plant comprising at least one rotating electric machine including at least one winding, wherein the winding comprises a conductor and an insulation system surrounding the conductor including at least one semiconducting layer forming an equipotential surface around the conductor and a solid insulation layer wherein the current carrying conductor comprises a plurality of insulated conductive strands, and at least one uninsulated conductive strand.

2. (Previously Amended) The plant as claimed in claim 1, wherein at least one of the layers and the solid insulation form a monolithic structure having substantially the same coefficient of thermal expansion.

3. (Previously Amended) The plant as claimed in claim 1, wherein the winding comprises a high voltage cable.

4. (Previously Amended) The plant as claimed in claim 3, wherein the at least one semiconducting layer comprises an inner semiconducting layer is in electrical contact with and at substantially the same potential as the conductor.

5. (Cancelled)

6. (Previously Amended) The plant as claimed in claim 1, wherein said at least one semiconducting layer comprises an outer semiconducting layer connected to a selected potential.

7. (Previously Amended) The plant as claimed in claim 6, wherein the selected potential is earth potential.

8. (Previously Amended) The plant as claimed in claim 3, wherein at least two of said layers form a monolithic structure and have substantially the same coefficient of thermal expansion.

9. (Cancelled)

10. (Currently Amended) The plant as claimed in claim 1, wherein the winding comprises a cable and ~~the conductor includes one or more current-carrying conductors, each conductor including a number of conductive elements~~, the at least one semiconducting layer includes an inner semiconducting layer and an outermost semiconducting layer being arranged around each conductor, and an insulating layer of solid insulation being arranged between the inner semiconducting layer and the outermost semiconducting layer.

11. (Cancelled)

12. (Previously Amended) The plant as claimed in claim 1, wherein the machine has a magnetic circuit including a cooled stator operative at earth potential.

13. (Previously Amended) The plant as claimed in claim 1, wherein the electrical machine includes a magnetic circuit ~~of the electric machine comprises~~ comprising a stator having a central axis and at least one slot and a stator winding located in the slot, said slot having a number of cylindrical openings each having a central axis parallel with the central axis of the stator and being disposed in the slot radially adjacent each other, each cylindrical opening having a substantially circular cross section and being separated by narrow waist parts therebetween.

14. (Previously Amended) The plant as claimed in claim 13, wherein the stator winding has three phases and the phases of said stator winding are Y-connected.

15. (Previously Amended) The plant as claimed in claim 14, wherein the stator winding includes a Y-point insulated from earth potential or connected to earth potential via a high-ohmic impedance and protected from over-voltages by means of surge arresters.

16. (Currently Amended) The plant as claimed in claim 14, wherein the Y-point of the stator winding is earthed via a suppression filter of third harmonic type, which suppression filter is designed to greatly reduce or eliminate third harmonic currents in the electric machine ~~at the same time as being dimensioned to limit and for limiting~~ voltages and currents in the event of faults in the plant.

17. (Previously Amended) The plant as claimed in claim 16, wherein the suppression filter is protected from over-voltages by means of surge arresters, the latter being connected in parallel with the suppression filter.

18. (Currently Amended) The plant as claimed in claim ~~15~~ 1, wherein the ~~at least one rotating electric machine has, including a high voltage side and a Y-point, and wherein the cable has a gradually decreasing insulation seen~~ insulation system has a thickness which decreases from the high voltage side towards the Y-point.

19. (Currently Amended) The plant as claimed in claim 18, wherein the ~~gradual~~ decrease in the insulation thickness is stepwise or continuous.

20. (Currently Amended) The plant as claimed in claim 13, wherein the machine comprises a generator ~~has~~ having a rotor and the stator ~~includes~~ including a yoke, and the circular cross section of the substantially cylindrical openings for the stator winding has ~~a~~ decreasing radius ~~seen from the yoke portion~~ towards the rotor.

21. (Previously Amended) The plant as claimed in claim 12, wherein the electrical machine comprises a generator including a rotor.

22. (Previously Amended) The plant as claimed in claim 21, wherein the machine is connectable to a local power supply for starting said machine.

23. (Previously Amended) The plant as claimed in claim 21, wherein the machine has two or more poles.

24. (Previously Amended) The plant as claimed in claim 23, wherein the rotor and the stator are so dimensioned that at nominal voltage, nominal power factor and overexcited operation, the thermally based current limits of stator and rotor are exceeded approximately simultaneously.

25. (Previously Amended) The plant as claimed in claim 23, wherein the rotor and the stator are so dimensioned that at nominal voltage, nominal power factor and over-excited operation, the thermally based stator current limit is exceeded before the thermally based rotor current limit has been exceeded.

26. (Previously Amended) The plant as claimed in claim 24, wherein it has 100% overload capacity at nominal voltage, nominal power factor and at over-excited operation.

27. (Cancelled)

28. (Previously Amended) The plant as claimed in claim 27, wherein the quadrature-axis synchronous reactance is considerably less than the direct-axis synchronous reactance.

29. (Previously Amended) The plant as claimed in claim 28, wherein the machine is includes an excitation system for enabling both positive and negative excitation.

30. (Previously Amended) The plant as claimed in claim 3, wherein the cable with solid insulation intended for high voltage have a conductor area of about between 30 and 3000 mm² and have an outer cable diameter of about between 20 and 250

31. (Previously Amended) The plant as claimed in claim 1, comprising stator and rotor circuits and cooling means therefor in which the coolant is in liquid and/or gaseous form.

32. (Previously Amended) The plant as claimed in claim 1, wherein the machine is arranged for connection to several different voltage levels.

33. (Previously Amended) The plant as claimed in claim 1, wherein the machine is connected to the power network without any step-up transformer.

34. (Previously Amended) The plant as claimed in claim 1, wherein the winding of the machine is arranged for self-regulating field control.

35. (Previously Amended) The synchronous compensator plant comprising at least one rotating electric machine having at least one winding, wherein the winding has an insulation system which, as regards its thermal and electrical properties, permits a voltage level in the machine exceeding 36 kV.

36. (Cancelled)

37. (Previously Amended) The rotating electric machine in the form of a synchronous compensator having at least one winding, wherein the winding comprises an insulation system including at least two semiconducting layers, each layer constituting essentially one equipotential surface, with solid insulation disposed therebetween.

38. (Cancelled).

39. (Previously Amended) A synchronous compensator plant including a rotating high voltage electric machine comprising a stator; a rotor and a winding, wherein said winding comprises a cable including at least one current-carrying conductor including a plurality of insulated strands and a lesser plurality of uninsulated strands and a cover surrounding the conductor in electrical contact therewith, including an inner layer surrounding the conductor and

being in electrical contact therewith; and an insulating layer surrounding the inner layer; and an outer semiconducting layer surrounding the insulating layer, said cable forming at least one uninterrupted turn in the corresponding winding of said machine.

40. (Previously Amended) The synchronous compensator plant of claim 39, wherein the cover comprises an insulating layer surrounding the conductor and an outer layer surrounding the insulating layer, said outer layer having a conductivity for establishing an equipotential surface around the conductor.

41. (Cancelled)

42. (Cancelled)

43. (Previously Amended) The synchronous compensator plant of claim 39, wherein the cover is formed of a plurality of layers including an insulating layer and wherein said plurality of layers are joined together to form a monolithic structure and being substantially free of cracks and defects.

44. (Original) The synchronous compensator plant of claim 39, wherein the cover is in electrical contact with the conductor.

45. (Original) The synchronous compensator plant of claim 44, wherein the layers of the cover have substantially the same temperature coefficient of expansion.

46. (Original) The synchronous compensator plant of claim 39, wherein the machine is operable at 100% overload for two hours.

47. (Original) The synchronous compensator plant of claim 39, wherein the cable is operable free of sensible end winding loss.

48. (Original) The synchronous compensator plant of claim 39, wherein the winding is operable free of partial discharge and field control.

49. (Previously Amended) The synchronous compensator plant of claim 39, wherein the winding comprises multiple uninterrupted turns.

50. (Previously Amended) The synchronous compensator plant of claim 39, wherein the cover is flexible.

Please add the following new claims:

51. (New) A synchronous compensator plant comprising at least one rotating electric machine including at least one winding, wherein the winding comprises a conductor and an insulation system surrounding the conductor including at least one semiconducting layer forming an equipotential surface around the conductor and a solid insulation layer, and wherein the machine is arranged for connection to several different voltage levels.